Electronic Waste

The sheer amount of electronic equipment that we buy, depend on, enjoy and then discard has resulted in a growing environmental challenge – electronic waste or E-Waste.

E-Waste is one of the fastest rising waste streams in the nation. Each year hundreds of thousands of computers, monitors, televisions, printers, copiers, fax machines, cell phones and other electronics become obsolete to consumers. Rapid advances in technology, a demand for new features and even planned obsolescence accelerate the generation of old, unwanted electronics.

E-Waste, however, provides a more complex challenge beyond the numbers. E-Waste contains metals and other materials that can be hazardous not only to the environment but to human health if not properly managed.

The overall challenge is to find ways to reduce the amount of E-Waste being generated followed by ways to reuse, recycle or properly dispose of older equipment.

E-Waste must be managed responsibly.

Electronics are one of the largest known sources of heavy metals and organic pollutants in the waste stream. Some electronics – usually those with cathode ray tubes (CRTs), circuit boards, batteries and mercury switches – contain hazardous or toxic materials such as lead, mercury, cadmium, chromium and some types of flame retardants.

CRTs are a particular concern. CRTs are the glass "picture tubes" in computer monitors, television sets and other video display devices that amplify and focus high-energy electron beams to create the image seen on the screen. In order to protect consumers from radiation, the glass in CRTs contains lead. Lead, in fact, makes up about 20 percent of the weight of each CRT or anywhere from four to eight pounds per unit according to some studies. Although the lead probably is not an environmental issue while the monitor or television remains intact, the lead may be released under typical conditions at a landfill.

What can you do?

You can reduce the environmental impact of your E-Waste by making changes in your buying habits, looking for ways to reuse including donating or recycling.

Preventing waste to begin with is the preferred waste management option. Consider, for example, upgrading or repairing instead of buying new equipment to extend the life of your current equipment and perhaps save money.
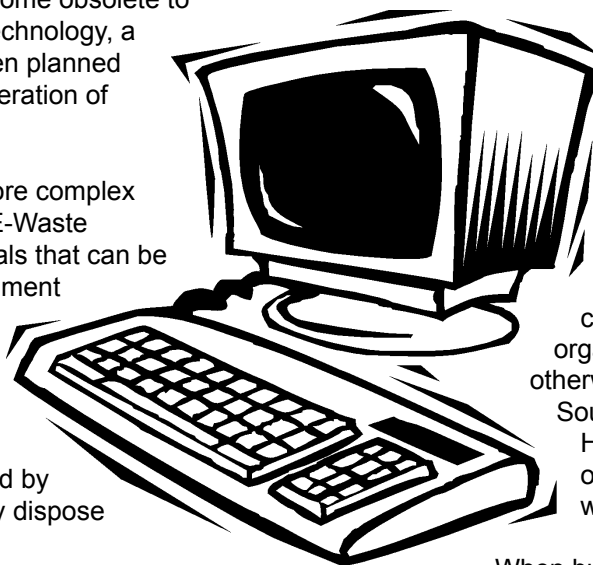
If you must buy new equipment, consider donating your still working, unwanted electronic equipment. This reuse extends the life of the products and allows non-profits, churches, schools and community organizations to have equipment they otherwise may not be able to afford. In South Carolina, for example, Habitat for Humanity Resale Stores, Goodwill and other similar organizations may accept working computers.

When buying new equipment, check with the retailer or manufacturer to see if they have a "take-back program" that allows consumers to return old equipment when buying new equipment. Dell Computers, for example, became the first manufacturer to set up a program to take back any of its products anywhere in the world at no charge to the consumer. The program will begin by the fall of 2006. For a list of retailers and manufacturers that recycle electronics, see the "FYI: Electronic Recycling Options for Households" fact sheet or visit **www.scdhec.gov/recycle**.

And, when buying, consider products with longer warranties as an indication of long-term quality.

Recycle E-Waste.

E-Waste can be recycled. Some components of E-Waste such as precious metals have considerable value on the recycling market, but frequently are difficult and expensive to process (dismantle, clean and sort) because of their toxicity.

Currently, E-Waste is one of the least recycled segments of the nation's waste stream, but that is changing. Three states – California, Maine and Maryland have enacted E-Waste legislation. Washington recently passed legislation that will take effect in 2009. As of 2006, more than 30 other states – including South Carolina – have introduced some form of E-Waste legislation.

There are E-Waste recycling opportunities in South Carolina.

Only Barnwell, Charleston, Hampton and York counties currently have programs to collect computers and other electronics. Some other local programs, like Dorchester County, hold single-day collection events throughout the year.

South Carolina has a state contract for schools and school districts, colleges and universities and state agencies to use to recycle computers and other electronic equipment. Other government entities also may use the contract.

As mentioned, there was legislation introduced in 2006 in South Carolina that would set up a statewide program to recycle E-Waste.

Do your part.

Each of us plays an important role in making recycling work, particularly recycling of electronics. Take the time to do your part. It's just right to recycle. For more information about recycling electronics, please call DHEC's Office of Solid Waste Reduction and Recycling at **1-800-768-7348** or visit **www.scdhec.gov/recycle**.

How much E-Waste?

The amount and composition of E-Waste reported are available from various sources and vary widely. The sources listed in this FYI represent the latest information available.

Consumer electronics comprised about 1.2 percent or 2.8 million tons of the municipal solid waste (MSW) generated nationwide according to the U.S. Environmental Protection Agency (U.S. EPA).
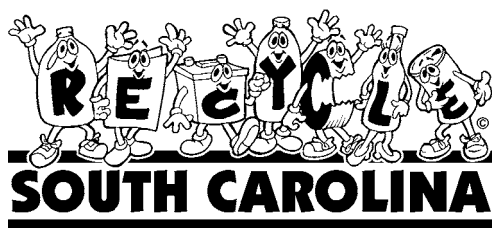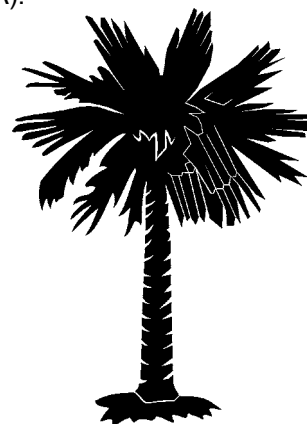
South Carolinians generated 4.7 million tons of MSW in FY 2005. Based on the U.S. EPA's rate, an estimated 56,025 tons of E-Waste was generated in the state. Only 728 tons of E-Waste was reported recycled according to the S.C. Solid Waste Management Annual Report for FY 2005.

About 20 million televisions become obsolete each year according to a 2003 report by the International Association of Electronics Recyclers.

About 20.6 million computers became obsolete in 1998 according to the National Safety Council.

Americans purchased about 20 million computers, another 7.8 million computer monitors and nearly 20 million televisions in 2004 according to the Consumer Electronics Association (CEA).

What do the CEA numbers "mean" for South Carolina? Based on the state's population (1.44 percent of the total U.S. population or 4.25 million of 296.4 million), it is estimated that South Carolinians bought about 288,000 computers, another 112,000 monitors and about 287,000 televisions in 2004.

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